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Collaboration in Guyana Reduces Costs, Improves Data Collection and Meets Program Needs

MEASURE DHS and the FHI-led Guyana HIV/AIDS Reduction and Prevention Project have joined efforts in Guyana to carry out the first national assessment of HIV health services in the country's history. In early summer of 2004, two USAID funded projects, MEASURE DHS and FHI, were each poised to collect data from health professionals at work in government facilities in Guyana. MEASURE DHS was planning a country-wide HIV/AIDS Service Provision Assessment (HSPA) while FHI was planning to evaluate a 2-year national prevention of mother-to-child-transmission (PMTCT) program managed by the government's Ministry of Health program.

Rather than conducting two separate surveys, MEASURE DHS collaborated with the local implementing agency, the Guyana Responsible Parenthood Association, and FHI to work out ways to conduct only one survey and still meet the needs of all the major stakeholders. MEASURE DHS modified the HSPA sampling all current and planned PMTCT sites in the country rather than just a representative sample. Thus, the SPA supplied FHI with information on staffing, facil-



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A poster at a rural health center in Guyana, promoting the prevention of mother to child transmission of HIV (PMTCT).

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Collaboration with local groups in Tanzania

Wide dissemination of DHS survey results often depends on collaboration, as local groups are more able to tap into community-level communication channels.

The data from the recent Tanzania HIV/AIDS Indicator Survey (THIS) are being shared with a variety of audiences through partnerships between ORC Macro and country-based organizations.

The Tanzania Gender Networking Programme recently held a gender conference at which flyers based on THIS data were distributed. The lead presentation also focused on data on women directly from the THIS. ORC Macro also worked with Family Health International (FHI) in Tanzania to prepare materials on HIV and youth for an event that disseminated results from three Tanzanian surveys.

ity infrastructure, equipment and supplies, support systems and management systems for all current and future PMTCT services, the centerpiece of Guyana's HIV prevention program.

At FHI's request MEASURE DHS also incorporated a new component into the survey to assess the quality of counseling provided at the PMTC sites. This new component combines observation of counseling with exit interviews with individual clients. The counseling assessment component proved to be an especially valuable addition to the survey, providing a much improved end-of-project evaluation of the PMTCT program which had focused on the training and hiring of PMTCT counselors. Ultimately, the enhanced HSPA and PMTCT evaluation will not only guide efforts to expand the national PMTCT program but also will help design new interventions funded through the President's Emergency Plan for AIDS Relief.

"We had to minimize the impact of these survey activities on the health staff, first because they take provider time away from patients and second because too many of these activities lead to health provider research fatigue." - DHS survey manager for Guyana

Merging two separate research instruments into one proved to be a win-win situation for all concerned. Guyana has few skilled researchers as well as few health care providers and service delivery sites. Carrying out two surveys would have been too taxing for this small country. As the Guyana survey manager noted, "I was very concerned about the amount of interviewing time needed from the government health providers during working hours just to complete our survey, let alone several other surveys. I thought it very important to minimize the impact of these survey activities on the government health staff, first because they take provider time away from patients and second because too many of these activities lead to health provider research fatigue."

Collaboration brought other benefits. Traversing Guyana's landscape is time consuming and expensive. Most of the country's ten regions are accessible only by boat, plane, or foot or, more often, by some combination of these means in addition to a four wheeled vehicle. To reach all 10 regions, FHI staff joined the DHS teams, and together in one visit, they evaluated PMTCT counseling and also collected data on other aspects of HIV prevention and care and support services.

Data collection for the Guyana HSPA is complete. The Guyana HIV/AIDS program managers have gained valuable information for monitoring health care and making evidence-based decisions for the future. MEASURE DHS has gained a new tool for assessing the quality of PMTCT counseling, and FHI has achieved its mandate to evaluate a national program. The experience has proved once again, that when organizations commit to a joint enterprise, everyone benefits. ■

MEASURE DHS assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. Funded by the United States Agency for International Development (USAID), MEASURE DHS is implemented by Macro International Inc., an Opinion Research Corporation company (ORC Macro), in Calverton, Maryland, with the Johns Hopkins University Bloomberg School of Public Health's Center for Communication Programs (Hopkins CCP), PATH, Casals and Associates, and Jorge Scientific Corporation. DHS Dimensions is published twice a year to provide information about the program and the status of DHS surveys. Send correspondence to MEASURE DHS, ORC Macro, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705, USA (tel.: 301-572-0200; fax: 301-572-0999; www.measuredhs.com). Project Director: Martin Vaessen.

New Research Highlights HIV Orphans, Trends in Ghana's Health Indicators, Gender Empowerment and Results of USAID Interventions in Madagascar

Orphans face educational and nutritional challenges

A new working paper from MEASURE DHS, *Education and Nutritional Status of Orphans and Children of HIV-Infected Parents in Kenya*, examines data from the most recent Demographic and Health Survey in Kenya (KDHS 2003) to explore whether orphaned and fostered children and children of HIV-infected parents are more disadvantaged in nutrition and education than children of non-HIV-infected parents. The study also examines if children of HIV-infected parents are less likely to receive health care than children of non-HIV-infected parents.

According to the paper, children of HIV-infected parents were significantly less likely to be attending school, more likely to be underweight and wasted, and less likely to receive treatment for ARI and diarrhea than other children of non-HIV-infected parents. The relationship between orphanhood and nutrition was not strong, although fostered children were somewhat more

"Other research has shown the challenges faced by orphaned children, but here we see that fostered children and those living with HIV-infected parents are equally vulnerable."
- Vinod Mishra, researcher

likely to be stunted, underweight, and wasted than children of HIV-negative parents. In addition, children of non-HIV-infected single mothers were found to be generally more disadvantaged in nutrition, health care, and schooling than children who live with both non-HIV-infected parents.

Trends in Demographic, Family Planning, and Health Indicators in Ghana

This report, the second in a series of two, highlights trends in population, family planning, and maternal and child health based on DHS surveys conducted between 1988 and 2003.

According to trend data, Ghanaian women now wait longer to have their first birth and the proportion of young women age 15-19 that have had a child or are pregnant with their first child has declined. Current use of any modern contraceptive method has steadily increased for women age 15 to 49, along with their desire to stop childbearing. Nevertheless, the dramatic decline in fertility experienced in the eighties and nineties appears to have slowed down. Infant and under-five mortality rates decreased between the 1988 GDHS and the 1998 GDHS, but that decline leveled off by the time of the 2003 survey.

Trends in household conditions, attitudes toward family size, children's medical treatment, and nutritional status of children are also examined.

A Focus on Gender: Collected Papers on Gender Using DHS Data

This group of six working papers focuses on the dynamics of gender in developing countries. The papers, commissioned by the MEASURE DHS project, were prepared by researchers recognized for their work in the areas of demography, reproductive health, and gender. The analyses presented are based on data from the Demographic and Health Surveys (DHS) project.

A common theme of several of the papers is the struggle to define women's empowerment and/or autonomy and then to adequately measure it. Five

of the working papers in this volume focus on the gender questions in the core DHS questionnaire, particularly the questions on household decision-making and women's autonomy and empowerment, and their relationship to different population, health, and nutrition (PHN) outcomes of interest. The last paper examines whether PHN outcomes vary by women's experience of domestic violence.

Madagascar Baseline Survey on Reproductive Health and Child Survival in USAID Intervention Zones

USAID has been supporting projects in the Madagascar provinces of Fianarantsoa and Antananarivo with specific, community-level interventions since 1997. In 2004, MEASURE DHS studied the results of these programs and found dramatic improvements related to maternal and child health, including: medical assistance for mothers before, during, and after the birth of their children; birth spacing; full vaccination coverage for children; exclusive breastfeeding practices; distribution of vitamin A capsules; and use of homemade oral rehydration therapy to treat diarrhea. Use of modern family planning methods in the intervention zone also increased, causing a decline in fertility and along with it, an important reduction in teenage pregnancy.

This study also found areas for improvement in: child malnutrition (stunting still affects about half of the children in the intervention zone); iron intake, (still very low among pregnant women); fertility rates (women age 15-49 in Fianarantsoa have an average of 6.6 children); and unequal access to education between women living in rural areas compared to those living in urban areas. ■

Summary of DHS Surveys

SOUTH/SOUTHEAST ASIA

Bangladesh 2004

2001 (Maternal Health Services/Maternal Mortality Survey)
1999/2000
1999/2000 (modified SPA)
1996/97
1993/94

Cambodia 2005

2000
1998

India 2005-06

1998–2003
1992/93

Indonesia 2002

2002 (Young Adult Reproductive Health Survey)
1997
1994
1991
1987

Myanmar 1996 (Special)

Nepal 2006

2002–05 (Benchmark Surveys/Various Topics)
2001
1996
1987 (In-depth)

Pakistan 2005

1990/91

Philippines 2003

1998
1993 (Safe Motherhood Survey)
1993

Sri Lanka 1987

Thailand 1987

Vietnam 2005 (AIS)

2002
1997

NORTH AFRICA/WEST ASIA/EUROPE

Armenia 2005

2000

Egypt 2005

2004 (SPA)
2003 (Interim)
2002 (SPA)
2000
1998 (Interim)
1997 (Interim)
1996/97 (Reasons for Nonuse in Upper Egypt)
1995
1992
1988

Jordan 2002

1997
1990

Moldova 2005

Morocco 2003/04

1995 (Panel)
1992
1987

Tunisia 1988

Turkey 2003 (limited assistance)

1998
1993

Yemen 1997

1991/92

CENTRAL ASIA

Kazakhstan 1999

1995

Kyrgyz Republic 1997

Turkmenistan 2000

Uzbekistan 2002 (Health Examination Survey)
1996

LATIN AMERICA & CARIBBEAN

Bolivia 2003

1998
1993/94
1989

Brazil 1996

1991 (Northeast)
1986

Colombia 2004/05 (limited assistance)

2000
1995
1990
1986

Dominican Rep. 2002

1999 (Experimental)
1996
1991
1986
1986 (Experimental)

Ecuador 1987

El Salvador 1985

Guatemala 1998/99 (Interim)

1997 (Health Expenditure Survey)
1997 (SPA)
1995
1987

Guyana 2004/05 (SPA)

2005 (AIS)

Haiti 2005

2000
1994/95

Honduras 2005-06

Mexico 2000 (SPA)

1987

Nicaragua 2001

1997/98

Paraguay 1990

Peru 2002–06 (Continuous)

2000
1996
1992
1986

1986 (Experimental)

Trinidad & Tobago 1987

SUB-SAHARAN AFRICA

Benin 2001

1996

Botswana 1988

Burkina Faso 2003

1998/99
1992/93

Burundi 1987

Cameroon 2004

1998
1991

Cape Verde 2004

Central African Rep. 1994/95

Chad 2004

1996/97

Comoros 1996

Congo (Brazzaville) 2005/06

Côte d'Ivoire 2005 (AIS)

1998/99
1994

Eritrea 2002

1995

Ethiopia 2005

2000

Gabon 2000

Ghana 2003

2002 (SPA)
1998
1993/94
1988

Guinea 2005

1999
1992

Kenya 2004 (SPA)

2003
1999 (SPA)
1998
1993
1989

Lesotho 2004

Liberia 2006

1986

Madagascar 2003/04

1997
1992

Malawi 2004/05

2000
1996 (KAP)
1992

Mali 2006

2001
1995/96
1987

Mauritania 2003 (Special)

2000/01

Mozambique 2003

1997

New Publications

Namibia 2000

1992

Niger 2005

1998

1992

Nigeria 2003

1999 (limited assistance)

1990

1986 (Ondo State)

Rwanda 2005

2001 (SPA)

2000

1992

Senegal 2005

1999

1997

1992/93

1986

South Africa 2003/04

1998

Sudan 1990

Swaziland 2005

Tanzania 2004/05

2003/04 (AIS)

1999 (Interim)

1996

1995 (Estimation of Adult and Childhood

Mortality in a High HIV/AIDS Population)

1994 (KAP)

1992

Togo 1998

1988

Uganda 2006

2004 (AIS)

2000/01

1995/96 (Negotiating Reproductive Outcomes)

1995

1988/89

Zambia 2006

2001/02

1996

1992

Zimbabwe 2005

1999

1994

1988

Bangladesh

Cameroon

Egypt

Indonesia

Madagascar

Morocco

Mozambique

Tanzania

2004 DHS Final Report

2004 DHS Final Report

2004 SPA

2002-03 Jayapura City Young Adult Reproductive Health Survey

2003-04 final report for the Baseline Survey of Reproductive Health and Child Survival in the USAID Intervention Zones (French)

2003-04 DHS Final Report

2003 DHS Final Report

2003-04 AIS Final Report

Africa Nutrition Chartbooks

Burkina Faso: 2003 Nutrition of young children and mothers (French/English)

Ghana: 2003 Nutrition of young children and mothers

Madagascar: 2003-04 Nutrition of young children and mothers (French/English)

Gender Reports

Kishor, S., ed. 2004. *Focus on Gender: Collected Papers Using DHS Data*. (OD32)

Further Analysis

Ghana Trend Report. *Trends in Demographic, Family planning and Health Indicators in Ghana*. July 2005. (TR2)

Akwara, P.A., G.B. Fosu, P. Govindasamy, S. Alayón and A. Hyslop. 2005. *An In-depth Analysis of HIV Prevalence in Ghana*. (FA46)

DHS Working Papers

Mishra, V, F Arnold, F Otieno, A Cross, R Hong. *Education and Nutritional Status of Orphans and Children of HIV-Infected Parents in Kenya*. (WP24)

Mishra, V., F. Arnold, G. Semenov, R. Hong and A. Mukuria. 2005. *Epidemiology of Obesity and Hypertension in Uzbekistan*. (WP25)

Final Reports Coming Soon

Tanzania DHS 2005

Armenia DHS 2005

Malawi DHS 2004-05

Chad DHS 2004

Ethiopia DHS 2005

All DHS publications may
be downloaded or ordered
online at
<http://www.measuredhs.com>

DHS Data at Work

Tanzanian President Uses DHS Data to Measure His Achievements

Citing data from the Preliminary Report of the 2004 Demographic and Health Survey and the 2003-04 AIDS Indicator Survey, President Mkapa announced great improvements in Tanzanian development. Achievements listed included increased access to clean water, a decrease in infant and under five mortality, and an increase in Vitamin A supplementation among children under five.

Tanzania Gender Group

The Gender Networking Programme, a gender group based in Dar Es Salaam held a gender conference in September. They distributed fact sheets focusing on women and AIDS, based on the results of the Tanzania HIV/AIDS Indicator Survey, and used THIS results as the base for the lead presentation at the conference, reaching an audience of about 200 people.

Maps Based on DHS Data Help Plan US Government HIV Interventions

MEASURE DHS is collaborating with MEASURE Evaluation to use results from the Tanzania HIV/AIDS Indicator Survey for monitoring and planning US government HIV interventions. Key indicators such as HIV prevalence, comprehensive

knowledge of HIV/AIDS and how to prevent transmission, education, and media exposure were mapped to reflect the regional variation in the country. The HIV prevalence data was combined with the 2002 Tanzania population census to estimate the number of HIV infected people by district; this is being used to plan FY06 President's Emergency Plan for HIV/AIDS Relief programs. An atlas of HIV indicators is also being produced in Tanzania. It will be used for further dissemination of the THIS results.

Nigeria DHS Results Prompt New Malaria Prevention Initiative

In response to the 2003 Nigeria DHS malaria data, Population Services International and the British Department for International Development (DFID) increased program efforts and budgets in order to market insecticide-treated bednets.

2005 World Malaria Report Uses DHS Data

The recently released 2005 World Malaria Report (from UNICEF and The World Health Organization) cites DHS data on child illness, use of bednets and antimalarial drugs. The report focuses on the Roll Back Malaria Project, but uses data from several sources to describe the current burden of disease in the developing world. ■

News Articles Worldwide Feature DHS Data

Cameroon, *Cameroon Tribune*: "Population Shun Condoms," by Brenda Yufeh, August 19, 2005

Bangladesh, *The New Nation*: "The vicious cycle of malnutrition," by Dr. AMM Anisul Awwal, PhD, September 3, 2005

Morocco, *Liberation Press*: "La mortalité maternelle et infantile reste inquiétante en Afrique du Nord: Algérie, Tunisie et Maroc," by Fatima Moho, April 9, 2005

Philippines, *Sun Star*: "Population office mobilizes media for public awareness," June 17, 2005

U.S., *The New York Times*: "Entrenched epidemic: wife-beatings in Africa," by Sharon LaFraniere, August 11, 2005

India, *Sunday Times*: "Sit at home and get an HIV test done," by Sushil Rao, June 17, 2005

Madagascar *Tribune*: "La santé de la mere et de l'enfant s'ameliore," April 8, 2005

Peru, *La Republica*: "El desafio de la salud maternal," by Alberto Garcia, April 11, 2005

Tanzania, *The Citizen*: "HIV/AIDS tests attract crowds at exhibition," by Deogratius Kiduduye, August 5, 2005

Nepalnews.com: "MDGs cannot be achieved if questions of RH are not squarely addressed," by Junko Sazaki, September 9, 2005

Philippines, *Channel News Asia*: "Filipinos highly misinformed about AIDS: survey," May 18, 2005

Ethiopia, *Addis Tribune*: "AIDS Pandemic Becomes Daunting Problem," January 30, 2004

Key Findings from Recent DHS Surveys

Jayapura City Young Adult Reproductive Health Survey

This survey was carried out in Jayapura City, the capital of Papua, Indonesia, where one in four people is between the ages of 15 and 24. The survey aimed at providing baseline data on issues related to knowledge, attitudes, and behaviors of young unmarried women and men regarding sexual activity, reproductive health, family planning, and HIV/AIDS prevention.

Ninety-five percent of the women surveyed and 88% of the men knew about modern contraceptive methods. Nine in 10 respondents said that they would prefer using a modern contraceptive method, preferably supplied by public health sources. However, unmarried people are not eligible to receive contraceptive methods from public health sources, even though 8 percent of women and 23 percent of men openly admit having had sexual intercourse before marriage.

Tanzania HIV/AIDS Indicator Survey (THIS) 2004

The 2004 THIS included HIV testing and revealed that 7 percent of Tanzanian adults are HIV positive. The infection rate among urban residents is more than 5 percent higher than among rural residents, but women have a slightly higher prevalence than men in all areas of the country.

HIV prevalence increases with education, as adults with secondary or higher education are 50 percent more likely to be infected than those with no education. Infection rates are three times higher among those in the highest wealth quintile than those in the lowest quintile.

Cameroon 2004

The 2004 Cameroon DHS reports that infant mortality and under-5 mortality have changed only slightly in the last 6 years, but young Cameroonian children

have a greater chance of survival to their 5th birthday than other children in the region. Nearly 50% of infants 12-23 months have been vaccinated with Expanded Program on Immunization (EPI) vaccines. Vaccine coverage has increased from 36% in 1998. The nutrition situation of children has not improved since 1998. Thirty percent of children less than 3

years of age are stunted and are chronically malnourished.

Thirteen percent of married women in Cameroon use a modern

method of contraception. The utilization of condoms has improved from 2 percent in 1998 to 8 percent in 2004.

HIV testing indicates that 5.5% of the adult population is infected with HIV.

The prevalence is higher among women than men in both urban and rural areas, and in households with greater economic status.

Bangladesh 2004

The 2004 BDHS reports a slight decline in fertility (from 3.3 during the 1990s to 3.0). Almost half (47%) of married women use a method of contraception.

Maternal health indicators have improved since the 1999-2000 BDHS: currently, almost half of women receive antenatal care compared to only one-third 5 years ago. However, 90 percent of births occur at home and the large majority of women do not receive postnatal care.

Child mortality has declined in the last 5 years and 73 percent of children are fully immunised. However, few sick children were taken to health care providers for treatment. ■

Visit the Statcompiler
(www.measuredhs.com/statcompiler) and
the AIDS Indicator Database
(www.measuredhs.com/hivdata) for
more DHS Data

DHS Welcomes Population and HIV Fellows

In 2005, DHS started a fellowship program, hiring recent doctoral recipients as Population and HIV researchers. The fellowships, sponsored by USAID, were created to provide training in the use of DHS data and to provide an opportunity for analysis of HIV data.

Chi Chiao received her doctoral degree in Public Health from UCLA in 2005. Her primary academic interests include the demographic and social processes that influence sexual behaviors. In particular, she is interested in exploring the multiple ways in which these processes, as well as the characteristics of individuals and their sexual relationships, influence the sexual behaviors of women.

Tesfayi Gebreselassie has joined the DHS team through MEASURE DHS partner, Casals and Associates. He completed his PhD in Economic Development and Demography from Pennsylvania State University in 2005. His thesis focused on child nutrition and poverty in Ethiopia. His research at DHS uses the reproductive calendar to examine issues of postpartum contraceptive use, breastfeeding, and contraceptive use. He is also working on a project about spousal communication on fertility preferences using couple's data.

Lekha Subaiya graduated in August 2005 from the University of Maryland at College Park with a doctoral degree in Sociology, and a specialization in demography. Her dissertation focused on the issue of aging in developing countries. Her research interests are family dynamics, union formation, and gender. At Macro, she is working on projects related to birth-spacing, non-marital fertility, and gender empowerment.

Two more population fellows and one additional HIV fellow are expected to join the DHS team by the end of the year. ■

Selected Statistics From DHS Surveys

SURVEYS	VITAL RATES			USE OF CONTRACEPTION (Currently Married Women 15–49)		MATERNAL CARE (Births in Last 5 Years)		CHILD HEALTH INDICATORS		
	Total Fertility Rate ^a	Total Wanted Fertility Rate ^a	IMR/Under-5 Mortality Rate ^b	% Currently Using Any Method ^c	% Currently Using Any Modern Method ^d	% Women Receiving Antenatal Care ^e	% Women Receiving Assistance at Delivery from Professional ^e	Median Duration (Months) of Breast-feeding ^f	% Children 0–59 Months Stunted ^g	% Children Fully Immunized ^h
CENTRAL ASIA										
Kazakhstan 1999	2.1	1.9	62/71	66	53	94	99	7	10	81
Turkmenistan 2000	2.9	2.7	74/94	62	53	98 ⁱ	97	18	22	90
Uzbekistan 2002	2.9	†	62/73	68	63	†	†	20	21	†
LATIN AMERICA/CARIBBEAN										
Bolivia 2003	3.8	2.1	54/75	46	26	79	61	20	27	50
Colombia 2000	2.6	1.8	21/25	77	64	91 ⁱ	86	13	14	52 ^m
Dominican Rep. 2002	3.0	2.3	31/38	70	66	98	98	7	9	35
Guatemala 1999	5.0	4.1	45/59	38	31	60	41	20	46	60
Haiti 2000	4.7 ^b	2.7 ^b	80/119	28	22	79	24	19	23	34
Nicaragua 2001	3.2	2.3	31/40	69	66	86	67	17	20	72 ⁿ
Peru 2000	2.9	1.8	33/47	69	50	84 ⁱ	59	22	25	66 ⁿ
NORTH AFRICA/WEST ASIA/EUROPE										
Armenia 2000	1.7	1.5	36/39	61	22	92 ⁱ	97	9	13	76
Egypt 2002	3.2	2.5	38/46	60	57	69	69	19	16	88
Jordan 2002	3.7	2.6	22/27	56	41	99	100	13	9	94 ^o
Turkey 2003	2.2	1.6	29/37	71	43	81	83	14	12	54
SOUTH/SOUTHEAST ASIA										
Bangladesh 2004	3.0	2.0	65/88	58	47	56	13	29	55	73
Cambodia 2000	4.0 ^b	3.1 ^b	95/124	24	19	38 ⁱ	32	24	45	40
India 1998-99	2.9	2.1	68/95	48	43	65 ⁱ	42 ⁱ	25	47 ⁱ	42
Indonesia 2003	2.6	2.2	35/46	60	57	92 ⁱ	66	22	†	51
Nepal 2001	4.1	2.5	64/91	39	35	49	13	33	51	66
Philippines 2003	3.5	2.5	29/40	49	33	88 ⁱ	60	14	†	70
Vietnam 2002	1.9	1.6	18/24	79	57	86 ⁱ	85 ⁱ	18	†	67
SUB-SAHARAN AFRICA										
Benin 2001	5.6	4.6	89/160	19	7	87	73	22	31	59
Burkina Faso 2002-2003	6.2	5.4	81/184	14	9	73	57 ⁱ	25	39	44
Cameroon 2004	5.0 ^b	4.5	74/144	26	13	83 ⁱ	62 ⁱ	18	32 ⁱ	48
Côte d'Ivoire 1999	5.2	4.5	112/181	15	7	84	47	21	25	51
Eritrea 2002	4.8	4.4	48/93	8	7	70	28	22	38	76
Ethiopia 2000	5.9 ^b	4.9 ^b	97/166	8	6	27 ⁱ	6	26	52	14
Gabon 2000	4.3 ^b	3.5 ^b	57/89	33	12	95 ⁱ	87	12	21	17
Ghana 2003	4.4 ^b	3.7 ^b	64/111	25	19	92	47 ⁱ	23	30	69
Guinea 2005	5.7	†	91/163	9	6	82	38	†	35	37
Kenya 2003	4.9	3.6	77/115	39	32	90	42 ⁱ	21	30	57
Madagascar 2003-04	5.2	4.7	58/94	27	18	80	51 ⁱ	22	48	53
Malawi 2000	6.3	5.2	104/189	31	26	91 ⁱ	56	24 ⁱ	49	70
Mali 2001	6.8	6.1	113/229	8	6	57 ⁱ	41	23	38	29
Mauritania 2001	4.7 ^b	4.3 ^b	74/116	8	5	65 ⁱ	57	21	35	32
Mozambique 2003	5.5	4.9	101/153	17	12	85	48	22	41	63
Namibia 2000	4.2	3.4	38/62	44	43	91	78	15	24	65
Niger 1998	7.5 ^b	7.2 ^b	123/274	8	5	40 ⁱ	44 ⁱ	21	41 ⁱ	18
Nigeria 2003	5.7	5.3	109/217	13	8	63	36	18	38	13
Rwanda 2000	5.8	4.7	107/196	13	4	92 ⁱ	31	33 ⁱ	43	76
South Africa 1998	2.9	2.3	45/59	56	55	94	84	16	†	63
Tanzania 1999	5.7	†	68/112	26	20	94	46	†	38	71
Uganda 2001	6.9	5.3	88/152	23	18	92 ⁱ	39	22 ⁱ	39	37
Zambia 2002	5.9	4.9	95/168	34	23	93	43	21	47	70
Zimbabwe 1999	4.0	3.4	65/102	54	50	93 ⁱ	73	20	27	75

† Not available from survey data.

‡ Not available until publication of final report.

a Based on 3 years preceding survey (women 15–49).

b Based on 5 years preceding survey.

c Excludes prolonged abstinence.

d Excludes periodic abstinence, withdrawal, "other."

e Care provided by medically trained personnel.

f Children <3 years old (any breastfeeding).

g Height-for-age z-score is below –2 SD based on the NCHS/CDC/WHO reference population.

h Children 12–23 months vaccinated (BCG, measles, three doses each DPT and polio).

i Based on last birth.

j Based on births in the preceding 3 years.

k Based on births in the preceding 4 years.

l Children 0–35 months old.

m Excludes measles.

n Children 18–29 months old.

o Excludes BCG.